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Community-led Watershed-based Water Resources Management: The Case of Balian, Pangil, Laguna

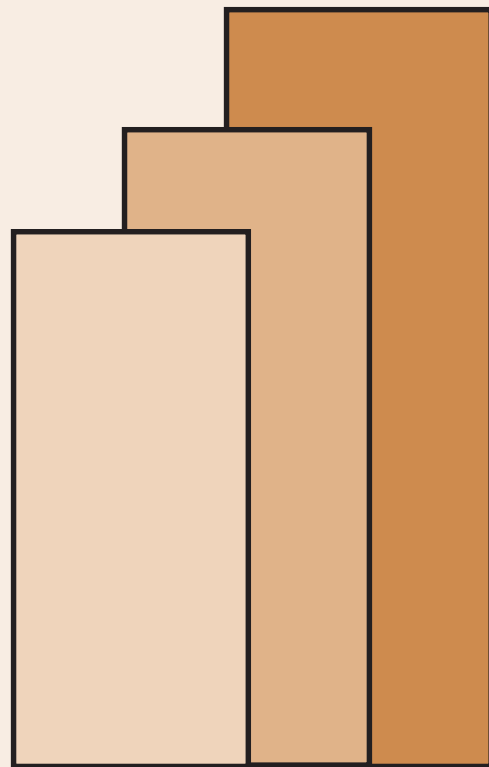
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Abstract

In Balian, the presence of indigenous institutions borne by a well entrenched and historically rooted and highly developed sociopolitical arrangement has enabled the local community to effectively link their governance and production activities to the watershed resource, despite opposition from some local political interests. The core of this is the *Samahan ng Balian para sa Pagpapauwi ng Tubig, Inc.* (SBPTI), a barangay based people's organization formed in 1926 with the goal of managing the water system sourced from a spring within a small watershed in the Sierra Madre Range. The historical roots of SBPTI have enabled present-day actors, with the assistance of NGO mediators, to deal with conflict and challenges, as they establish order (i.e., "govern") in their community vis-à-vis their domestic water needs. While most of the livelihoods in the community are nonresource based, considering that only a small percentage are dependent on the watershed for their immediate livelihoods, it was shown in the Balian case how local mobilization can influence those whose farming activities are within the watershed areas to take on more ecological practices. It also illustrated how people in downstream communities, if properly equipped with the correct ecological perspective on the importance of watersheds in their daily lives, could be directly involved in watershed management. It was obvious from the Balian experience that people can be directly involved in ecological restoration and protection activities in situations where they have full awareness of the opportunity costs should they do otherwise.

Keywords: community-based watershed resource governance, civil society, small watersheds, NGO mediators

**COMMUNITY-LED WATERSHED-BASED
WATER RESOURCES MANAGEMENT:
The Case of Balian, Pangil, Laguna**

Antonio P. Contreras, Ph.D.¹

Introduction: Framework for Analysis

It is believed that the failure to implement a watershed approach has seriously undermined the management of water resources in the country. The key task, therefore, is to inquire into the conditions that would enable governance arrangements to effectively manage watershed resources. The successful implementation of a watershed approach to water resources management rests on four important elements, namely:

- Bio-physical framework—this rests on placing the watershed as the basic planning unit
- Economic framework—this focuses on water being treated as an economic good, and not just as a social good. Only in doing so that efficiency considerations can be brought to bear in managing water resources
- Legal-institutional framework—this refers to the presence of a legal basis and supporting institution to implement the proposed water resource management strategy
- Political-social framework—this refers to the presence of socio-political arrangements that enable wide support from groups and associations in the local communities and from local government

The necessity of an economic framework will also go beyond the market dynamics of water as an economic good, but also include the dynamic interactions between livelihoods and governance. This is premised on the fact that the effectiveness by which society manages its resources, including watershed resources, is mediated by the interactions between modes of production and governance. This, therefore, necessitates locating livelihoods and their sustainability as core considerations.

The presence of an adequate legal-institutional framework, as well as a supportive political-social environment is undoubtedly crucial in the overall success of any watershed management endeavor. Here, several questions need to be addressed:

- What are the conditions that affect the linkages between watershed resource management and the sustainability of governance and production systems?
- How can governance mechanisms be “directed” towards improving livelihood sustainability and the maintenance of watershed resources?

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- How are governance and production mechanisms transformed as communities within watershed areas or those dependent on watershed resources are integrated further into mainstream market and political structures? What are the implications of these transformations in scale to watershed management, particularly to managing the resource using the watershed approach?

In the final analysis, a successful implementation of a watershed approach to water resources management requires four distinct “resource” endowments that go beyond the natural resources present in a given watershed. These are:

- Political capital, in the form of a legal framework
- Social and institutional capital, manifested in social governance capacity
- Intellectual capital, expressed as technical and administrative capacity
- Financial capital, which includes economic and financial assets and resources

This case study inquires into the importance of a watershed approach as a way of linking non-forest based livelihoods and water use to watershed management, thereby illustrating a linkage between the biophysical upstream resources with its downstream users. It also analyzes the role of local grassroots organizations and the power of social movements in providing the necessary mechanisms to foster sustainability and political viability. Finally, it explores some of the impacts of an enlarging scale, dramatized both by market commodification seen in expanding commercialization of watershed resources, as well as state-building processes by local government units, on locally-initiated watershed management activities.

The Watershed

The forest watershed for this case study is only about 31-hectares located at the slopes of the Sierra Madre mountains facing Balian, which is the second largest barangay of the Municipality of Pangil in the Province of Laguna. While Balian has a population of 4,712 people in 1,100 households in 2000, there are no well-defined settlements within the small watershed. Most of the population in the barangay resides in the coastal area located downstream along the national highway. This makes Balian a relatively urbanized barangay that is accessible to all forms of land transportation.

To the north of Balian is the town proper of Paete while the poblacion of Pangil lies on the south. The Sierra Madre Mountains lie on the east of the barangay while Laguna de Bay bounds it on the west. There are four sitios that comprise Balian, namely, San Isidro, Palacio, Candelaria and San Marcos.

The geography of the barangay is such that it has three agro-ecological zones, namely, coastal, lowland and uplands. Consequently, the topography ranges from the flat coastal and lowland areas to the rolling and occasionally steep and mountainous upland areas. The coastal and lowland areas are devoted to human settlements and agricultural cultivation, mainly rice. The uplands, on the other hand are devoted to upland crops like

coconuts, bananas, citrus, coffee, mangoes, rambutan, bamboos and root crops. Some areas of the uplands are occupied by Cogon grass (*Imperata cylindrica*). The remaining portions of the uplands are still considered as second growth forest, where some indigenous species of forest plants such as rattan, giant fern, edible fern, *dita*, *usiw*, and *tibig* are found. Other species of trees such as narra, acacia and mahogany could also be found, mainly due to the reforestation activities conducted by the community in the watershed areas.

While agriculture is still found in Balian, it is not the major source of income for the people. In fact, only 28.16% of the households are involved in agrarian-based occupations. Farms in Balian are also small, with size ranging from 0.2 to 1.0 hectare in the coastal and lowland areas and from half of a hectare to about 2 hectares in the uplands. In terms of tenurial arrangements, most of the coastal and lowland farms are under leasehold arrangements while those in the upland areas are either owned or held under a mere tax declaration, even as some farmers enjoy mere right of access to their farms under some forms of tenancy agreement with other claimants.

Being a relatively urbanized barangay, majority of the people are engaged in non-agrarian occupations. In fact, 38.68% of the households are involved in the service sector, while 26.57% are employed as blue-collared workers.

The Dynamics of Community-Based Watershed Management

Legal Framework: Political Capital

As early as 1925, the community in Balian has already mobilized to manage its water resources, through the formation of the *Samahan ng Balian para sa Pagpapauwi ng Tubig, Inc.* (SBPTI), a barangay based people's organization formed with the goal of managing the water system sourced from a spring within a small watershed in the Sierra Madre Range. In December of 1926, the villagers, through SBPTI, petitioned the Municipal council of Pangil for them to be allowed to establish a water system in Balian. The Council approved the petition through a resolution. At the time, the organization was already managing two springs.

There were moves to merge the local waterworks system with the larger municipal waterworks system, but the local community opposed these. The Municipal Council, cognizant of the opposition, issued a series of resolutions in July and September of 1929 specifically providing that any move to integrate the local system with the municipal system should only occur with the tacit approval of SBPTI.

In 1930, SBPTI's request to lay water pipes across the main road was approved by the Department of the Interior. The coverage of SBPTI's operations expanded with the subsequent discovery of two other springs in 1940 and 1950, respectively.

The period beginning in the 1960s up to the 1970s saw the entry of commercial logging operations in the area, through the Interwood, which was owned by the Cojuangcos. While this provided employment to some members of the local community, it also led to the destruction of the watershed cover. This eventually led to the reduction of the water supply emanating from the springs, a phenomenon that was felt beginning in the 1980s.

While cognizant of the negative impacts of forest destruction on their water supply, the community however discovered that they do not have a mandate to protect the watershed. Through the mediation of an NGO, the Southern Tagalog Regional Action Program (STRAP), the community became familiar with the provisions of PD 705, and the other laws regarding watershed management. In 1992, SBPTI requested the local barangay council to issue an ordinance to protect the Balian Watershed. Such request was elevated to the Municipal Council, which subsequently passed a resolution declaring a 50-meter radius buffer zone in all water sources. Later in the same year, the radius was expanded to 100 meters. What cemented the legal framework supportive of the activities of SBPTI was the recognition given to it by the Department of Environment and Natural Resources (DENR).

However, a problem emerged with regards to the Local Government Unit (LGU), particularly in the context of the relationships between SBPTI and the Barangay Council of Balian. The passage of the Local Government Code has, instead of providing the local community more space to manage the watershed, seriously undermined its capacity. The Local Barangay council, armed with the new powers vested in it by the code, particularly on resource management, maneuvered to take over the control of the waterworks system, and even was successful in acquiring crucial funding from JICA for waterworks improvement away from SBPTI, its intended beneficiary. However, the project jointly implemented by the Barangay LGU and the DPWH-NCR failed to improve the water supply, as it was found out that the pipes installed did not comply with the JICA specifications.

In this particular instance, the Community, armed with an appreciation of its legitimate claim over management of the water system through the leadership of SBPTI, again mobilized to correct the flaws of the project, by reinstalling pipes using its own resources, and relying on community voluntarism.

Social Governance Capacity: Social and Institutional Capital

As indicated above, it is clear that the management of the watershed in Balian is very much carried out through a grassroots based organization, the SBPTI, and a technical arm, the Lingap Kalikasan. The SBPTI, with its long history of community-based resource management, subsist on a very strong social and institutional capital.

There is also an indigenous mechanism for conflict resolution in the area, called the *pahumog*, which is conducted every Holy Thursday. This activity provides for an

opportunity for discussion and dialogue among the community members on issues that involve their welfare and development, one of which is water and the environment. The involvement of SBPTI in these annual grassroots based community meeting has provided mechanisms to discuss environmental and water-related issues.

SBPTI, while acting as lead group in watershed issues, including reforestation and protection activities in the 100-meter buffer zones of all springs, get support both from internal groups and external mediators. It has support from local fisherfolks and upland farmers, as well as from DENR, DA and STRAP. In fact, it formed an alliance with local community groups that eventually led to the formation of *Lingap Kalikasan*, a group whose focus is the management, protection and rehabilitation of the watershed zone.

However, its relationship with local politicians, particularly the barangay LGU remains contentious, even as the municipal LGU is supportive of SBPTI. This is, ironically, the source of uncertainty as to the future of SBPTI, as this relationship engenders conflict, and wherein SBPTI and *Lingap Kalikasan* remain targets of political maneuvering by interested local political leaders.

Technical and Administrative Capacity: Intellectual Capital

Being the lead group, SBPTI relies mainly on its own technical capacity to manage not only the waterworks system, but also recently the protection and rehabilitation activities of the watershed. However, it receives enabling support mainly from STRAP, its partner NGO.

STRAP has successfully provided technical training on forest and watershed management of SBPTI. An offshoot of this is the formation in 1993 of *Lingap Kalikasan*, a multi-sectoral community-based group involved in people's education as a vehicle for resource management activities in the watershed zone. It also conducts actual reforestation and forest protection activities. STRAP provided *Lingap Kalikasan* technical training on the following: planning and organizational management, watershed management, forest laws and regulations

Economic Considerations: Financial Capital

The operations of SBPTI and *Lingap Kalikasan* largely subsist on the voluntarism of its members. In fact, in the past, members contributed as low as 5 or 10 centavos, or some just contributed their labor. However, they also received some limited financial assistance from external sources, as well as from government. Furthermore, SBPTI relies on its own internal funds consisting of water user fees that it collects from its member households

The existing watershed management process in Balian, while recently captured in a textual form as a "plan," is a living example of an organic, unwritten, process oriented

domain of mobilization that focused on water. The principle of watersheds became an important element of this “living plan” in 1992.

The main driving force behind the community effort to manage their water resources, despite meager resources, is the fact that their lowland livelihoods (farming, fishing, off-farm employment), while not primarily based on the watershed, nevertheless are indirectly affected by it. In this context, the livelihood imperative, while indirect, becomes a strong financial incentive for people to invest their time and resources in protecting the watershed.

Lessons Learned and Implications for Advocacy

The shortness of this case study is in no way indicative of the shallowness of the lessons that one can learn from the experiences of the community in Balian. At this point, it is interesting to go back to the core questions raised earlier, and how the Balian experience fares in the context of such questions.

The first question asks for the conditions that affect the linkages between watershed resource management and the sustainability of governance and production systems.

It is clear in the Balian case that the presence of indigenous institutions borne by a well-entrenched and highly developed socio-political arrangement has enabled the local community to effectively link their governance and production activities to the watershed resource. In effect, the historical roots of SBPTI have enabled present-day actors to deal with conflict and challenges, as they establish order (i.e. “govern”) their community vis-à-vis their domestic water needs. While most of the livelihoods are non-resource based, considering that only a small percentage are dependent on the watershed for their immediate livelihoods, it was shown in the Balian case how local mobilization can influence those whose farming activities are within the watershed areas to take on more ecological practices. It also illustrated how people in downstream communities, if properly equipped with the correct ecological perspective on the importance of watersheds in their daily lives, could be directly involved in watershed management.

The second question was directed at the way governance mechanisms can be “directed” towards improving livelihood sustainability and the maintenance of watershed resources.

It was obvious from the Balian experience that people can be directly involved in ecological restoration and protection activities in situations where they have full awareness of the opportunity costs should they do otherwise. The case study, however, did not adequately illustrate the direct linkages between livelihood sustainability and watershed resources management, considering that most of the households rely on non-agricultural livelihoods, even as those that are engaged in agriculture are mostly in downstream lowland areas. Nevertheless, the Balian experience has provided a small-

scale illustration of how relatively urban areas relying on upland sources for their water supply can be mobilized to be directly involved in the provisions of ecological services.

This modality is different from strategies that provide either direct or indirect payments to resource-dependent stakeholders. It should be also emphasized that the use of water fees, and their local appropriation, was clearly illustrated in Balian, where SBPTI collected fees from water users, and such are directly used to finance the activities that previously included only the management of the water system, but has since included watershed protection and rehabilitation activities. This can provide a very important lesson for similar cases involving urban communities with close proximity to their watersheds.

The third and final question seeks to inquire into how governance and production mechanisms are transformed as communities within watershed areas or those dependent on watershed resources are integrated further into mainstream market and political structures. Furthermore, the implications of these transformations in scale to watershed management, particularly to managing the resource using the watershed approach, are also sought.

While the Balian case did not illustrate the impacts of the transformation of markets, considering that the production systems are already well integrated to markets, it nevertheless captured the impacts of state expansion. Specifically, the negative impacts of political expansionism seen in the intervention made by the local barangay LGU into the domain of water previously held by SBPTI, had cast serious doubts on the overall generalizability of the constructive role to resource governance of local governments in the context of decentralization. While it is still maintained that support from local LGUs are crucial in the success and sustainability of local watershed resource management using the watershed approach, adequate safeguards should be provided to ensure that indigenous mechanisms, such as those that are already in place in Balian as early as 1925, be protected from the destructive effects of politics. This can be achieved if LGUs recognize the presence of organic institutions, and just harness these, instead of supplanting them with new, even if legally warranted, institutional arrangements.

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